

# **FINAL ENVIRONMENTAL ASSESSMENT**

**CHARLESTON AIR FORCE BASE  
REPAIR RUNWAY 03/21  
CHARLESTON, SOUTH CAROLINA**

**S&ME PROJECT NO. 1134-03-779**

## **Prepared For:**

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## **US AIR FORCE - CHARLESTON AIR FORCE BASE**

### **FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

#### **REPAIR OF RUNWAY 03/21 CHARLESTON AIR FORCE BASE**

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) and 32 Code of Federal Regulations (CFR) 989, *Environmental Impact Analysis Process (ELAP)*, Charleston Air Force Base (CAFB) has prepared an Environmental Assessment (EA) for this action. The purpose of the EA is to determine the extent of environmental impacts that may result from repair of Runway 03/21 and to evaluate whether these impacts, if any, will be significant.

#### **DESCRIPTION OF PROPOSED ACTION**

The United States Air Force (USAF) proposes to repair Runway 03/21 to improve its compliance with the Unified Facility Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*. This will be accomplished by implementing the following measures: reconstruction of the existing 7,000 ft x 150 ft runway in its entirety; construction of 25-foot paved shoulders and 175-foot graded shoulders on either side of the runway; construction of a 1,000-foot paved overrun on Runway 03; construction of an 800-foot paved overrun on Runway 21; grading of the approximate 2,000 ft wide by 1,000 ft deep "graded area" at each runway end; replacement of existing runway edge lighting, end lighting, and other associated runway Navigational Aids; existing approach lighting in Runway 03 will be removed; reconstruction of taxiway pavements and lighting at tie-in to Runway 03/21; and reconstruction of approximately 850 ft of taxiway Delta at the Runway 03 tie-in.

No paved overruns currently exist. This project will add 1,000 ft on the 03 end and 800 ft on the 21 end in order to be as close to compliance as possible. The UFC criteria specifies that Class B runways for Army and Air Force airfields must have 1,000 linear ft of paved overrun. Runway 03/21 does not currently meet this criteria.

Two options for the planned improvements were considered in this EA. The Preferred Action is as described above. Alternative 1 is to relocate the southeast to northwest oriented Runway 03/21 to a different location within the CAFB/Charleston Airport. Alternative 1 is not the preferred action because it would require additional property be designated as runway and airfield space, possibly amounting to several hundred acres. Existing taxiways would need to be redesigned and realigned to connect to the new runway, and new taxiways would need to be constructed. Existing tarmac and aprons would also need to be redesigned, depending on the new runway's location. The resulting changes would clearly create significantly more impact to the environment and disruption to current airfield operations than the proposed alternative.

The No-Action Alternative (no repairs to Runway 03/21) would not improve the current condition of non-compliance with the requirements of UFC 3-260-01.

The Proposed Action is consistent with existing land uses; it brings Runway 03/21 nearly into compliance, and is minimal in its impact on the environment. The effects to the environment as outlined in the attached EA document include temporary construction activity-related impacts, as well as a permanent filling of 1.75 acres of non-jurisdictional isolated wetlands, deemed by the state to be non-significant. Therefore, this proposed action is not expected to have a significant impact on the overall environment.

#### CONCLUSION

Based on the findings presented in the EA, a FONSI to the environment is appropriate if the Proposed Action is implemented. Therefore, an Environmental Impact Statement (EIS) is not required for this project.

All interested agencies, groups and persons disagreeing with this decision are invited to submit written comments for consideration by the Charleston AFB Environmental Office. For questions regarding the EA, contact 437 CES/CEVP Environmental Office at Charleston AFB, South Carolina, (843) 963-4976.

#### SIGNED:



**GLEN G. JOERGER**, Colonel, USAF  
Commander, 437th Airlift Wing  
Environmental Safety and Occupational Health Council Chairperson

DATE: 20 FEB 06



**COVER SHEET**  
**FINAL ENVIRONMENTAL ASSESSMENT**  
**REPAIR AND EXTENSION OF RUNWAY 03/21**  
**CHARLESTON AIR FORCE BASE, CHARLESTON, SOUTH CAROLINA**

- A.** Responsible Agency: Department of the Air Force
- B.** Proposed Action: Replacement of Runway 03/21 pavement and airfield lighting; removal of 03 approach lighting, addition of paved overruns, re-grading of runway shoulders and re-grading of each overrun area.
- C.** Written comments and information requests should be directed to: Joe Camp, 437<sup>th</sup> Civil Engineering Squadron, Environmental Management Flight (437 CES/CEVP), Charleston Air Force Base, 100 W. Stewart Avenue, Charleston, SC 29404-4827
- D.** Report Designation: Draft Environmental Assessment (EA)
- E.** Executive Summary/Abstract: Runway 03/21 currently has no paved overrun. The Unified Facility Criteria (UFC) 3-260-01 *Airfield and Heliport Planning and Design* specifies that Class B runways for Army and Air Force airfields must have 1,000 LF of paved overrun at each end. Runway 03/21 does not currently meet these criteria. Also repairs to the Runway 03/21 surface and subgrade are required due to heavy continuous use since its original construction. The repair and extension of the runway and paved overruns to comply with UFC rules will include the following specific items.
1. Reconstruction of the existing 7,000' x 150' runway in its entirety;
  2. Construction of 25' paved shoulders and 175' graded shoulders on either side of the runway;
  3. Construction of a 1,000' paved overrun on Runway 03;
  4. Construction of a 800' paved overrun on Runway 21;
  5. Grading of the approximate 2000' wide by 1000' deep "graded area" at each runway end;
  6. Replacement of existing runway edge lighting, end lighting, and other associated runway NAVAIDS;
  7. Existing approach lighting in Runway 03 will be removed
  8. Reconstruction of taxiway pavements and lighting at tie-in to Runway 03/21.
  9. Reconstruction of approximately 850 feet of taxiway Delta at the Runway 03 tie-in.

The purpose of the EA is to assist in the decision making process with regard to whether it is economically feasible and environmentally sound to add paved overruns and shoulders to Runway 03/21 to meet UFC 3-260-01.

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- II. Agency Coordination Letters
- III. Previous Environmental Documents and Permits – Cumulative Effects Analysis

## 1.0 PURPOSE AND NEED FOR ACTION

### 1.1 Introduction

The Charleston Air Force Base (CAFB) is located in Charleston County in southeast South Carolina, approximately 15 miles inland from the Atlantic Ocean. CAFB lies within the coastal zone of South Carolina between the Ashley and Cooper Rivers. A site location map of the CAFB and surrounding areas is provided as Figure 1. Land around the CAFB consists of a mix of residential, commercial, industrial and vacant land.

CAFB encompasses 3,772 acres of property, formerly owned and operated by the Charleston Municipal Airport. The Charleston Municipal Airport began operations in 1931 and was activated as a U.S. Army Air Corps Base during World War II. The base currently operates under a joint-use agreement with Charleston County Aviation Authority (CCAA) for shared use of runways and navigational aids by civilian general aviation, commercial and military aircraft.

CAFB has two runways positioned in a cross-wind orientation. The ends of the runways are identified by the whole number to the nearest one-tenth degree of the magnetic azimuth of the runway centerline when viewed from the direction of approach. The north-northeast to south-southwest oriented runway is approximately 7,000 linear feet (LF) and is designated as Runway 03/21. The northwest to southeast oriented runway is approximately 9,000 LF and is designated as Runway 15/33.

No paved overruns currently exist. This project will add 1,000 feet on the 03 end and 800 feet on the 21 end in order to be as close to compliance as possible. The Unified Facility Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*, specifies that Class B runways for Army and Air Force airfields must have 1,000 LF of paved overrun. Runway 03/21 does not currently meet these criteria.

This Environmental Assessment (EA) has been prepared on behalf of the CAFB for the proposed repair of Runway 03/21. The proposed action will have permanent effects on the environment

such as non-jurisdictional wetlands, as well as temporary impacts to water and air quality, noise and other factors.

## **1.2 Purpose and Need**

Repair of Runway 03/21 is necessary to improve compliance measures per UFC 3-260-01 and to maintain safe operation of the airfield.

## **1.3 Decisions to be Made**

This EA evaluates potential effects from implementing the proposed action, an alternative action, as well as the no action alternative. The purpose of the EA is to assist in the decision making process with regard to whether it is economically feasible and environmentally sound to repair Runway 03/21.

## **1.4 Scope of the Environmental Assessment**

The EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, Council on Environmental Quality regulations, and the Air Force Environmental Impact Analysis Process (EIAP) published as 32 CFR Part 989. Three design alternatives are evaluated in the following sections of this document. Design alternative one is the proposed action of repairing Runway 03/21. Design alternative two is to relocate the southeast to northwest oriented runway to a different location. Alternative three is the "No-Action Alternative" in which no action is undertaken. The environmental effects of each alternative are evaluated and a determination of the most feasible alternative with the least environmental impact is identified.

## **1.5 Applicable Regulatory Requirements and Required Coordination**

The EA has been prepared to assist the CAFB in complying with the following federal and state regulations and policies:

- Clean Air Act (42 U.S.C. 7401 *et seq.*);
- Coastal Barrier Resources Act of 1982 as amended by the Coastal Barrier Improvement Act of 1990 (16 U.S.C. 3501-3510);
- Coastal Zone Management Act

- Clean Water Act (CWA) 1977, Sections 401 and 404 (33 U.S.C. 1341 *et seq.*);
- U.S. Army Corps of Engineers (COE) Wetlands Regulations (33 CFR Parts 230 *et seq.* and 320-330);
- U.S. Environmental Protection Agency (EPA) Section 404 (b)(1) Guidelines (40 CFR 230);
- Executive Order 11990 - Protection of Wetlands;
- Air Force Instruction (AFI) 32-7064 - Integrated Natural Resources Management, 1994;
- Coastal Zone Management Act of 1972 (16 U.S.C. 1456(c));
- Water Quality Improvement Act of 1974;
- Department of Defense Instruction (DoDI) 4715.3 - Environmental Conservation Program;
- National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) Regulations implementing NEPA;
- The Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA).
- Endangered Species Act (ESA) 1973, as amended;
- 40 CFR, Chapter I and V, Protection of Environment;
- Fish and Wildlife Coordination Act, 1965 (16 U.S.C. 661-666c);
- Migratory Bird Treaty Act of 1918;
- Interagency Agreement for Professional and Technical Assistance in Wildlife, Waterfowl and Wetlands Management between the Department of the Air Force and US Fish and Wildlife Service, dated 19 November 1992.

## **2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION**

### **2.1 Alternative Evaluation Criteria**

Each alternative was evaluated based on the following criteria:

- Alternative improves CAFB compliance with UFC 3-260-01, *Airfield and Heliport Planning and Design*, for Class B Air Force runways;
- Alternative is economically feasible;
- Alternative minimized impacts to environmental and cultural resources;
- Alternative does not interfere with critical airlift missions;
- Alternative does not decrease the efficiency of runway and base operations; and,
- Alternative complies with applicable state and federal environmental regulations.

### **2.2 Alternatives Considered**

#### **2.2.1 Repair Runway**

Design alternative one (the preferred alternative) is the proposed action consisting of:

1. Reconstruction of the existing 7,000' x 150' runway in its entirety;
2. Construction of 25' paved shoulders and 175' graded shoulders on either side of the runway;
3. Construction of a 1,000' paved overrun on Runway 03;
4. Construction of a 800' paved overrun on Runway 21;
5. Grading of the approximate 2000' wide by 1000' deep "graded area" at each runway end;
6. Replacement of existing runway edge lighting, end lighting, and other associated runway NAVAIDS;
7. Existing approach lighting in Runway 03 will be removed
8. Reconstruction of taxiway pavements and lighting at tie-in to Runway 03/21.
9. Reconstruction of approximately 850 feet of taxiway Delta at the Runway 03 tie-in.

#### **2.2.2 Runway Relocation**

Design alternative two is to relocate the southeast to northwest oriented runway to a different location within the CAFB.



### **2.2.3 No Action Alternative**

This option represents the do-nothing alternative – the option of not building an extension to the runway.

## **2.3 Evaluation of Alternatives**

### **2.3.1 Repair Runway**

Design alternative one is the option being extensively considered in the design of the repair of the runway and its graded and paved overruns. This option will primarily involve the use of the existing runway alignment, flight paths, taxiway connections and other facilities already in existence. This option will not involve the effort of permanently re-routing or changing the configuration of the CAFB and CCAA facilities. This option will require a closure of Runway 03/21 to air traffic during the construction phase of the project.

### **2.3.2 Runway Relocation**

Design alternative two is the relocation of Runway 03/21 to an alternative location. This design alternative has not been considered practical since the existing Runway 03/21 is suitable in its current alignment, and the improvements to be made in alternate one would improve compliance with criteria. Therefore aside from the explanation below, this alternative is not being considered as a reasonable alternative.

Option two, if exercised within the CAFB/CCAA airport perimeter, would require extensive studies and analysis prior to its final design and construction. Also this option would require additional property be designated as runway and airfield space, possibly amounting to several hundred acres. Existing taxiways would need to be redesigned and realigned to connect to the new runway, and new taxiways would need to be constructed. Existing tarmac and aprons would also need to be re-designed, depending on the new runway's location.



This option would likely cause a temporary closure of one or both existing runways at the CAFB/CCAA facility. This design option would require extensive preparation of runway subsurface, including grading, and compaction prior to paving along the new alignment. These activities being conducted on a new runway alignment, along with the necessary airport modifications referenced above would likely result in a much higher monetary cost than necessary. Also there would be significant disruption to commercial air traffic and military missions.

#### **2.3.3 No Action Alternative**

This option would not meet the needs of the CAFB for use of Runway 03/21 as outlined in the requirements of UFC 3-260-01, *Airfield and Heliport Planning and Design*, for Class B Air Force runways.

#### **2.4 Description of the Proposed Action**

1. Design alternative one (the preferred alternative) is the proposed action outlined in section 2.2.1.

### **3.0 AFFECTED ENVIRONMENT**

Based on review of available data, site reconnaissance and agency correspondence, impacts on the natural and human environments have been determined. This section will outline the anticipated affects of the project as proposed, as well as any required permits, which must be obtained for portions of the construction. Copies of the respective regulatory agency correspondence are provided in Appendix B. These correspondence documents do not include detailed analyses by any agency, nor do they constitute permits to conduct the proposed activity. All required environmental and construction related permits will be coordinated and obtained following approval of the draft EA and detailed engineering plans.

#### **3.1 Aesthetics**

No landscaping or architectural features exist within the view shed of the Runway 03/21 area, other than those currently a part of the airport facilities. Within lines of sight of Runway 03/21 are the CCAA International airport terminal, the CAFB terminal and C-17 aircraft apron, general aviation terminal, several civilian, commercial and military hangars, taxiways and the airport perimeter road. Surrounding much of the airport perimeter are also some heavily forested areas, which consist mainly of unmanaged hardwood/pine forest.

#### **3.2 Air Quality**

The Federal Clean Air Act (42 U.S.C. 7401 *et seq.*) as enacted in 1990 provides that emission sources must comply with accepted air quality standards. The existing facilities as used by the CAFB and CCAA operations produce chiefly aircraft fuel exhaust gasses. Also the ancillary facilities of both the CAFB and CCAA are utilized by many types of ground transport including passenger cars, trucks, and heavy equipment such as loading and unloading vehicles, forklifts and the like. These sources, as well as local industrial and other sources have not contributed to any documented violations of the Clean Air Act. The current conditions at the CAFB/CCAA as a part of the Charleston community are in compliance with EPA and South Carolina Department of Health and Environmental Control (SCDHEC) standards of air quality. The following permit will be required for this project.

- Air Permit (Temporary) for the construction of asphalt and/or concrete batch plants to conduct the work.

### **3.3 Coastal Resources**

The Coastal Zone Management Act of 1972 (16 U.S.C. 1456(c)) protects coastal resources including tidal waters and creeks, marshes, dune and beach systems as well as some non-tidal freshwater wetlands. The CAFB property contains both jurisdictional and non-jurisdictional wetlands (Approximately 353.99 acres – per Pinnacle Consulting Report 2003). Of these, approximately 1.75 acres of non-contiguous, non-jurisdictional cleared wetlands occur in the graded area of Runway 03/21 (Appendix B – U.S. Army Corps of Engineers Correspondence). The proposed project may include, but not be limited to, the following permit:

- State (Office of Ocean and Coastal Resource Management - OCRM) Land Disturbance and Stormwater Permit

### **3.4 Compatible Land Use**

The current land use on the CAFB/CCAA facility includes airfield and terminal operations. The properties are surrounded by a mix of residential, commercial and industrial properties. Some vacant land is also present in the vicinity, and includes a mix of forested and cleared areas. The airport has had no impact on the nearby land uses, other than those that may affect the use of airspace at the CAFB and international airport. The proposed action will have no effect on the existing land use of the CAFB or surrounding properties.

### **3.5 Ecologically Sensitive Areas**

The CAFB and CCAA contains extensive habitat for a variety of common southeastern woodland plants and animals typical of mixed hardwood forest types. The property contains a mix of disturbed and second growth wetland and upland habitats including palustrine forested wetlands, mesic upland woods and open grassed areas surrounding the airfield facilities. These areas have been studied within the recent past for the occurrence of any unique habitats or species considered rare or imperiled by natural resource agency standards. No areas located within the CAFB Runway 03/21 project area are deemed to be “ecologically sensitive”.

### **3.6 Health and Safety**

The CAFB and CCAA properties are currently managed to promote safety of individuals as well as teams when conducting operations, whether ground based or aeronautical in nature. The airfield area of operations safety rules are dictated by the airfield manager and the Federal Aviation Administration (FAA) control tower, with whom all persons must coordinate to enter, operate in or move about on. All access to the airfield is strictly controlled and safety briefings, tests and a stringent airfield driver training program is in place to insure all drivers understand the rules and procedures when moving on the airfield. Runways such as 03/21 are to be crossed only with permission of the FAA control tower.

Other safety programs involve the reduction in Bird Aircraft Strike Hazard and reduction of Foreign Objects & Debris (FOD). These programs involve the minimization of the likelihood of birds striking aircraft in flight or on takeoff and landing, as well as reducing FOD on the taxiways and runways. Active and passive methods for reducing bird populations and thereby risk of strikes are used. All personnel for the CAFB and CCAA as well as contractors are encouraged to remove FOD from aircraft movement areas as they encounter it, thereby reducing the risk of damage to aircraft.

### **3.7 Farmlands**

No Natural Resource Conservation Service – Farm Service Agency (NRCS) designated farmland areas are present on the CAFB/CCAA property. Therefore no description of such areas is included in this study.

### **3.8 Floodplains**

Charleston County is a participant in the National Flood Insurance Program. Floodplains and floodways are established by the Federal Emergency Management Agency (FEMA) and are delineated on Flood Insurance Rate Maps (FIRM). The FIRM for the CAFB is provided in the figures section of this document.

The CAFB/CCAA property is located within flood zones A, B and C, as determined by the North Charleston City FIRM, panel 12 of 18 (Appendix A). The majority of the airfield is in flood zone "C", which is defined as an area of minimal flooding. All of Runway 03/21 is in flood zone "C". Extensive drainage ditches are located around the airfield to reduce the risk of flooding.

### **3.9 Hazardous Materials**

Hazardous waste materials have been generated and documented at several sites throughout the CAFB. Two of these areas known as Solid Waste Management Units (SWMUs) are located in the vicinity of Runway 03/21. SWMU 53, a former fire protection training area is located at the south end of Runway 03, and is inactive. This SWMU is co-located with and being monitored in conjunction with SWMUs 60 and 71. A No Further Action Document exists for the soils in this area; however, groundwater contamination is still being monitored. SWMU 56, a former fire demonstration area, is located on the east side of the intersection of Runway 03/21 and the center taxiway, and is inactive. A No Further Action document was developed for this site by CAFB in 1991 and no Constituents of Concern (COCs) are expected to pose a hazard. The locations of the SWMUs are depicted in figures attached in Appendix II. Grading will occur within the SWMU 56 footprint, and may occur within the SWMU 60/71 footprint. All restoration sites at CAFB are governed by the base's RCRA Part B Permit. Any disturbance to sites associated with the Runway 03/21 Repair project will be conducted in accordance with the requirements of that permit.

### **3.10 Historic and Cultural Resources**

One cultural resources site is recorded on the CAFB and is identified by the designation 38CH1705. It was deemed not eligible for listing in the National Register of Historic Places by the South Carolina Department of Archives and History and State Historic Preservation Office (SHPO) in 1998. The SHPO has been contacted regarding the proposed activities in the repair and extension of Runway 03/21. A reply was received on April 7, 2005 concurring that this project does not require an intensive archeological survey. The letter concurs that this project will not affect cultural resources; however, if any manmade objects fifty years or older, are encountered during construction or excavation, their office should be notified.

### **3.11 Noise**

Noise is defined as any unwanted, undesirable sound or audible disturbance. The presence of aircraft operations at the CAFB/CCAA airfield is regularly causing the presence of noise, particularly during times of heavy air traffic during daylight hours. The CAFB air operations consist mainly of the operation and maintenance of an airlift wing of C-17 "Globemaster" aircraft. This aircraft is utilized by the Air Mobility Command for the transport of military personnel, troops and material to and from overseas positions and bases.

This mission is particularly important at this time due to the Global War on Terror (GWOT). An increased number of sorties by military airlift aircraft such as the C-17 is expected during times of war or national emergency. Overseas deployment of troops to Operation Iraqi Freedom and Operation Enduring Freedom, for example, necessitate more frequent flights in and out of Charleston AFB. Civilian aircraft operations are expected to increase concurrently with population increases in the Charleston metro area.

Noise studies have been previously conducted by the CAFB to determine the level of noise created by aircraft operations known as Air Installation Compatible Use Zone (AICUZ) study. These studies have determined that an acceptable level of noise is generated by the operations of the CAFB. The most recent study was conducted in 2004.

### **3.12 Socioeconomic Impacts**

The CAFB has many socioeconomic impacts on the surrounding community. The presence of the base has promoted a cooperative relationship between the City of North Charleston and the CAFB, with expanded opportunities for commerce between military personnel and local businesses. Military families who are stationed at CAFB participate in the local workforce and often will remain in the Charleston area after completion of time in service.

The CAFB is constantly improving its facilities to better serve the Air Force personnel and their families, as well as its airlift mission. This creates business opportunities for contractors, and creates jobs for a very diverse labor force within the Charleston community.

### 3.13 Threatened and Endangered Species

Endangered Species Act (ESA) 1973, as amended provides protection for those species designated by the Federal government as Threatened & Endangered (T&E) or Candidate species along with their essential habitats. These species include plants and animals. States may also list species under other legal designations, which do not afford legal protection but identify species as rare or of special concern. The CAFB has conducted three wildlife and T&E studies since 1993, the most recent in 2003 by Pinnacle Consulting. These studies have not documented the presence of any T&E species listed as of 2003. The following table outlines the non-marine species that have been documented as occurring in Charleston County.

**Table 1: – Threatened, Endangered and Candidate animal species that occur or have been recorded in Charleston County’s Terrestrial or Wetland Habitats.**

ANIMAL SPECIES	HABITAT
Piping Plover ( <i>Charadrius melodus</i> )	Expansive sand or mudflats in close proximity to sand beach
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Inland waterways and estuarine areas
Wood Stork ( <i>Mycteria americana</i> )	Feed in fresh and brackish wetlands and nest in cypress or other wooded swamps
Bachman’s Warbler ( <i>Vermivora bachmanii</i> )	Probably extinct
Red-cockaded Woodpecker ( <i>Picoides borealis</i> )	Mature pine and hardwood stands > 30 years of age
Loggerhead Sea Turtle ( <i>Carretta carretta</i> )	Open Ocean and estuarine rivers
Flatwoods Salamander ( <i>Ambystoma cingulatum</i> )	Open mesic pine/wiregrass flatwoods
Shortnose Sturgeon ( <i>Acipenser brevirostrum</i> )	Atlantic seaboard rivers
Gopher Frog ( <i>Rana capito</i> )	Floodplains; wet meadows; pastures; ponds
Least Tern ( <i>Sterna antillarum</i> )	Sandy beaches; sandbars

**Table 2 – Threatened, endangered and candidate plant species in Charleston County.**

PLANT SPECIES	HABITAT
Canby’s Dropwort ( <i>Oxypolis canbyii</i> )	Open Cypress Ponds
Seabeach Amaranth ( <i>Amaranthus pumilus</i> )	Beach dunes
American Chaffseed ( <i>Schwalbea americana</i> )	Open fire managed xeric pine forest
Pondberry ( <i>Lindera melissifolia</i> )	Shallow depression ponds of sandhills



### **3.14 Traffic and Transportation**

The CAFB maintains a system of roads falling under the jurisdiction of the base police. Traffic entering and leaving CAFB property is regulated at gates located on Dorchester Road and the Airport Perimeter Road. Airfield traffic by ground vehicles is controlled by the airfield manager, and the aircraft traffic is controlled by the FAA control tower.

### **3.15 Water Quality and Wetlands**

The CAFB property contains both jurisdictional and non-jurisdictional wetlands (Total of 353.99 acres – per Pinnacle Consulting Report 2003). Of these, approximately 1.75 acres of non-contiguous, non-jurisdictional cleared wetlands occur in the proposed graded area of Runway 03 end of the project (Appendix II – U.S. Army Corps of Engineers Correspondence).

Jurisdictional wetlands are regulated by the USACE and the South Carolina Department of Health and Environmental Control (SCDHEC) under Sections 404 and 401 of the Clean Water Act. In the coastal counties of South Carolina, SCDHEC – Office of Ocean and Coastal Resource Management (OCRM) also has regulatory authority over all wetlands or aquatic areas, under the Coastal Zone Management Act and the Stormwater/Land Disturbance Permit Program.

The permitting of construction projects in areas which do not involve impacts to wetlands or surface waters involve the OCRM land disturbance and storm-water permitting division.

Engineers and planners are generally required to show in the construction plans that storm-water runoff will be managed to minimize sedimentation of downstream receiving water bodies. The OCRM has determined in a letter dated November 17, 2005 that the impacts to the wetlands in this project do not present an adverse impact to coastal water resources (Appendix II).

### **3.16 Wild and Scenic Rivers**

There are no wild and scenic rivers located on or immediately adjacent to the contiguous CAFB property.



### **3.17 Indirect and Cumulative Impacts**

The Council on Environmental Quality (CEQ) defines indirect and cumulative effects as “the impact on the environment that results from the incremental impact of the action when added to past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.”

Cumulative environmental impacts are most likely to occur when a relationship exists between a proposed action and other actions in a similar location, time period, and/or involving similar actions. As an example of cumulative impacts, a presently occurring project on land directly adjacent to CAFB involves the construction of a fuselage assembly plant for Vought Aircraft Industries (see USACE public notice – Appendix II). The project involves a 387 acre site, with land clearing and construction of the assembly plant and attendant facilities. Of the 57.26 acres of jurisdictional wetlands or Waters of the United States located on the site, 51.53 were permitted to be filled. This makes the effect on natural resources in the vicinity greater than those undertaken by a single entity, such as CAFB.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

This section will outline the specific environmental factor, and its occurrence or non-occurrence within the CAFB property, in particular in the area of Runway 03/21. The effects of the proposed action will be addressed with a conclusion of whether the alternative will adversely affect this environmental factor or not. Then the effect of the No-Action Alternative will be discussed.

### **4.1 Aesthetics**

The CAFB/CCAA airfield does not consist of any landscaped areas or views, which are valued for the aesthetic value. The CAFB airfield is surrounded by airport terminals, hangars and other base facilities. It is unlikely that the construction on Runway 03/21 will adversely affect any aesthetic areas under the proposed action.

The No-Action Alternative would not affect aesthetics in or around the CAFB.

### **4.2 Air Quality**

Construction equipment used during the construction phase of this project is anticipated to produce exhaust as well as dust throughout the grading process. An onsite concrete and or asphalt batch plant may be located on the site to facilitate faster and less expensive construction of the runway. Air permits will be required if these facilities are proposed during construction. Other Best Management Practices (BMPs) used during construction will include use of water truck sprayers to reduce dust, and proper vehicle maintenance should minimize adverse effects to the air quality. Minor adverse effects to air quality are expected during construction under the proposed action. However, the project as proposed would not represent a noted impact to the environment as long as correct procedures are implemented during construction.

The No-Action Alternative would not affect air quality in or around the CAFB.

#### **4.3 Coastal Resources**

The CAFB property, Runway 03/21 in particular, contains 1.75 acres of non-jurisdictional isolated freshwater wetlands. These areas are not Federally regulated, and the unavoidable impact to this area will not constitute a major impact to coastal resources. OCRM will likely issue coastal zone consistency certification for this minor impact to the waters of the state, in correlation with the OCRM's land disturbance and storm-water permitting activity. No other coastal resources such as marshes, beaches, or tidal waters will be affected by this project. Minor adverse effects to coastal resources (isolated wetlands) are expected during construction under the proposed action.

The No-Action Alternative would not affect coastal resources in or around the CAFB.

#### **4.4 Compatible Land Use**

The CAFB/CCAA airfield is currently utilized to conduct military and civilian aviation activities. The repair and expansion of the proposed areas of Runway 03/21 will not constitute a change in land use. It is unlikely that the construction on Runway 03/21 will adversely affect any land uses under the proposed action.

The No-Action Alternative would not affect land uses in or around the CAFB.

#### **4.5 Ecologically Sensitive Areas**

No ecologically sensitive areas are documented on the CAFB property, in particular the Runway 03/21 project area. These areas include rare habitats and areas where minor physical or chemical disturbance can result in disruption of ecosystem structure or function such as coastal estuaries. Run-off from the site will be controlled using accepted BMPs. It is unlikely that the construction on Runway 03/21 will adversely affect any ecologically sensitive areas under the proposed action.

#### **4.6 Health and Safety**

The CAFB maintains a conscientious safety program for military personnel, civilian contractors and visitors to the airfield facility. The proposed project would likely result in many people working on the airfield at Runway 03/21 who would need to become familiar with the safety procedures on the airfield and in aircraft movement areas. The CAFB and CCAA airport will maintain at least one active runway (Runway 15/33 during this project). It is therefore imperative that the safety standards for all personnel conducting work on the CAFB runway 03/21 be maintained at a high level to avoid accidents. Workers will also need to be conscious of Foreign Objects and Debris (FOD) as they are building the runway with a variety of materials, which when loose can be a hazard to aircraft.

This project will involve the movement of large quantities of heavy equipment, trucks and other vehicles throughout the aircraft movement area. This will be mitigated by a rigorous safety program. It is likely that the construction on Runway 03/21 will slightly increase safety concerns under the proposed action.

The No-Action Alternative will eventually adversely affect aeronautical safety related to the usage of Runway 03/21. In the short term, no safety concerns will increase due to construction activity.

#### **4.7 Farmlands**

No farmlands are present on the CAFB. It is unlikely that the construction on Runway 03/21 will adversely affect any farmlands under the proposed action.

The No-Action Alternative would not affect farmlands in or around the CAFB.

#### **4.8 Floodplains**

Runway 03/21 is located entirely within flood zone "C", where there is little risk of flooding. The project will be designed with adequate drainage of runways and graded areas into the existing network of ditches already maintained by the CAFB and CCAA. It is unlikely that the

construction on runway 03/21 will adversely affect any floodplain areas under the proposed action.

The No-Action Alternative would not affect floodplains in or around the CAFB.

#### **4.9 Hazardous Materials**

SWMU 56 will be disturbed during the construction of the runway improvements, and SWMU 60/71 may also be affected. Disturbance to the SWMUs will be conducted in accordance with Part B of the RCRA Permit that CAFB maintains. Appropriate BMPs such as typical sediment and erosion control measures, should be taken. Worker protection during the construction phase of this project should also be considered when there are grading or digging activities in this area. All restoration sites at CAFB are governed by the base's RCRA Part B Permit. Any disturbance to sites associated with the Runway 03/21 Repair project will be conducted in accordance with the requirements of that permit.

The No-Action Alternative would not affect hazardous waste sites in or around the CAFB.

#### **4.10 Historic and Cultural Resources**

The CAFB does not contain any places which are eligible for registry with the National Register of Historic Places. Also the SHPO has been notified of the project and is satisfied with the current level of data collected on the CAFB. If any artifacts are found during construction, the SHPO should be notified. It is unlikely that the construction on Runway 03/21 will adversely affect any historic and cultural resources under the proposed action.

The No-Action Alternative would not affect historical or cultural resources in or around the CAFB.

#### **4.11 Noise**

The CAFB and CCAA property currently consists of an airfield with two active runways. The noise generated by the takeoffs and landings at this airport are considered commonplace and

acceptable. The proposed project will not result in a significant or sudden increase in air traffic following completion. During construction Runway 03/21 will be closed, in effect diverting all air traffic to Runway 15/33. Currently approximately 33% of aircraft takeoffs and landings are on Runway 03/21, and 67% are on Runway 15/33. .

The shifting of all flight activities to Runway 15/33 will result in a 50% increase in takeoffs and landings on this runway. This will result in increased frequency of high noise levels resulting from more over-flights in the path of Runway 15/33. Surrounding residential neighborhoods in these flight paths may notice an increase in air traffic. The intensity of the noise is not expected to increase; however, the number of occurrences of aircraft noise will. This noise impact will be temporary for the duration of Runway 03/21's construction.

During construction, noise will increase along Runway 03/21 as the runway and graded areas are built. This noise will be from the use of heavy equipment. However, it is unlikely that this noise will affect personnel other than those on the construction site. Due to the necessary increase in air traffic on Runway 15/33 it is probable that the project will have temporary adverse impacts related to aircraft noise in the areas approaching and leaving runway under the proposed action.

The No-Action Alternative would not affect noise in or around the CAFB.

#### **4.12 Socioeconomic Impacts**

The numbers of military personnel stationed at the CAFB are not expected to change due to this project. Families of military personnel will not be re-located or displaced by this project. No businesses will be adversely affected by this project on Runway 03/21. The project will have a temporary beneficial impact on the number of construction jobs available locally, as it does involve an extensive amount of grading and pavement installation. It is unlikely that the construction on Runway 03/21 will adversely affect any social or economic factors under the proposed action.

The No-Action Alternative would not affect social or economic factors in or around the CAFB.

#### **4.13 Threatened and Endangered Species**

The CAFB has conducted three wildlife and T&E studies since 1993, the most recent in 2003 by Pinnacle Consulting. These studies have not documented the presence of any T&E species listed as of 2003. The areas to be impacted by this project on Runway 03/21 are largely cleared as of this date, and no unique habitats are located within this area. It is unlikely that the construction on Runway 03/21 will adversely affect any threatened or endangered species under the proposed action.

The No-Action Alternative would not affect threatened or endangered species in or around the CAFB.

#### **4.14 Traffic and Transportation**

This project will take place on an airfield, which has a constant flow of air traffic. The closure of runways and taxiways through the course of this project will be likely; however, they will be temporary and short term. Volume of ground transportation will increase slightly in and around the CAFB property as construction material and debris and waste materials are transported on and off of the airfield. No lane closures or special automobile traffic patterns will be necessary as the project does not include any public roads. These impacts can be mitigated best by the coordinated scheduling of runway closure times, shipping and receiving and other traffic challenges by the affected parties. Traffic and transportation both ground and air are controlled by the FAA tower. It is likely that the construction on Runway 03/21 will have a very minor temporary effect on traffic and transportation under the proposed action. Changes will be managed by the tower.

The No-Action Alternative would not affect traffic or transportation in or around the CAFB.

#### **4.15 Water Quality and Wetlands**

Approximately 1.75 acres of non-contiguous, non-jurisdictional cleared wetlands occur in the graded area of Runway 03 end of the project. This wetland area will be unavoidably impacted by this project, due to the existing location of the runway and the location of the needed graded areas adjacent to the graded overruns. This amount of wetland impact is typically permissible for projects deemed in the public interest, which is the case in the project. The permitting vehicle used for this non-jurisdictional wetland will likely be the SCDHEC-OCRM land disturbance and storm-water permit. It is non-contiguous, and therefore does not constitute a resource for fisheries. The area has been recently cleared by an earlier project to clear vegetation from areas within the safety zones as required by the FAA. The wetland does not consist of a unique wetland habitat, nor is it capable of supporting endangered or threatened species. The remaining wetland is of very low ecological value.

Water quality concerns will be managed using the latest approved measures to reduce erosion and sedimentation during and after construction. Storm water plans will be reviewed by the OCRM prior to approval of the grading and drainage plans. For this reason it is likely that the project will have very minor adverse impacts on water quality or wetland resources under the proposed action.

The No-Action Alternative would not affect water resources or wetlands in or around the CAFB.

#### **4.16 Wild and Scenic Rivers**

There are no wild and scenic rivers located on or immediately adjacent to the contiguous CAFB property. For this reason the project will have no adverse impacts on any wild or scenic rivers under the proposed action.

The No-Action Alternative would not affect wild and scenic rivers in or around the CAFB.



#### **4.17 Indirect and Cumulative Impacts**

CEQ regulations stipulate that the cumulative effects analysis within the EA consider the potential environmental impacts resulting from the "incremental impacts of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. As stated in Section 3, cumulative effects occur when similar actions take place in approximately the same time frame or location. Other projects with the potential to add to the proposed action are (1) a CAFB project completed in 2004 in which approximately 400 acres of trees were cleared to bring the airfield into compliance with Air Force and FAA airfield safety regulations, and (2) a presently occurring project on land directly adjacent to CAFB involving the construction of a fuselage assembly plant for Vought Aircraft Industries (see USACE public notice – Appendix II). The project involves a 387 acre site, with land clearing and construction of the assembly plant and attendant facilities.

Combined, these projects have caused impact to approximately 788 acres of forest (or wetlands), with the Vought Aircraft Industries project causing a wetlands loss of approximately 51.53 acres. Due to the past and presently occurring activities in the vicinity and the comparatively small size (1.75 acres of non-jurisdictional wetlands) of the areas affected by this proposed action, the proposed activity will not contribute significantly to any cumulative adverse impacts.

This action will have some temporary impacts on air traffic patterns, resulting in increases in noise levels around Runway 15/33. This will be primarily due to an approximate 33% increase in aircraft using Runway 15/33 during Runway 03/21 closure. The noise levels will not exceed the health and safety standards referenced in the AICUZ study conducted in 2004 and referenced in section 3.11. Positive effects of the project include benefits to the local economy on at least a temporary basis due to the increase in construction employment at the site, as well as suppliers to the contractors executing the project.

The No-Action Alternative would not affect indirect and cumulative impacts in or around the CAFB.

## **5.0 LIST OF PREPARERS**

### **S&ME, Inc.**

Eric J. McClanahan, PWS  
Environmental Department-Charleston Branch  
Biologist/Natural Resources Project Manager – Environmental Consultant  
8 years experience as a Natural Resources Professional

Sharon Mitchell, PE  
Environmental Department – Charleston Branch  
Environmental Engineer – Environmental Consultant  
7 years experience as a Project Manager and Environmental Consultant

James L. Killingsworth, CHMM  
Environmental Department – Charleston Branch  
Senior Project Manager/Senior Reviewer  
15 years experience as an Environmental/Industrial Hygiene Professional

## **6.0 AGENCY/PUBLIC COORDINATION**

The following agencies were consulted during the preparation of this document:

- United States Fish and Wildlife Service
- United States Department of the Army - Charleston District , Corps of Engineers
- South Carolina Department of Natural Resources – Wildlife Resources Division
- South Carolina Department of Archives and History and State Historic Preservation Office
- South Carolina Office of Ocean and Coastal Resource Management
- South Carolina Department of Health and Environmental Control – Bureau of Air Quality.

**FIGURES**

**Site Vicinity Map – USGS Quadrangle**

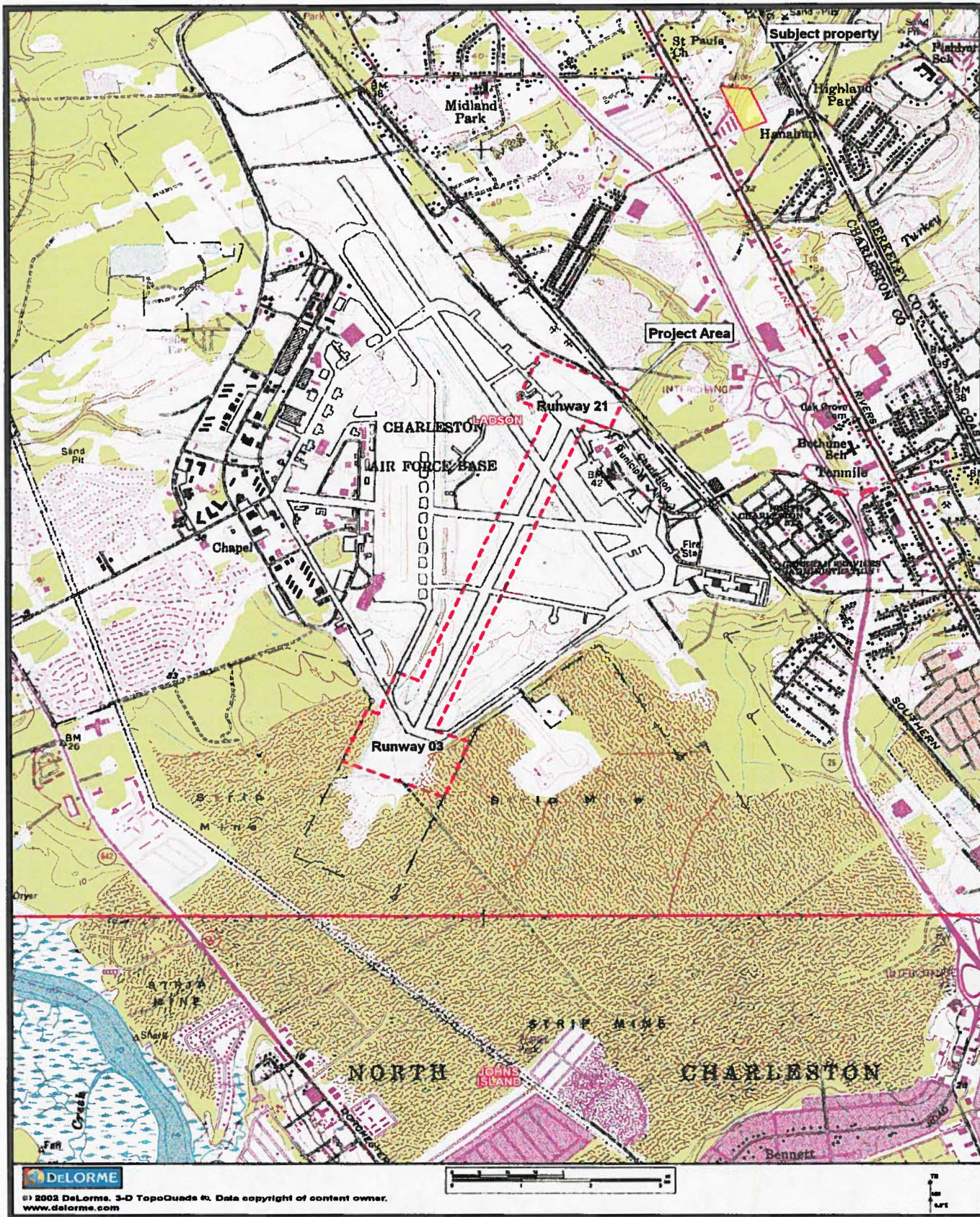
**Existing Runway Layout with Proposed Overrun Layout**

**FIRM of the Charleston Air Base**

**Solid Waste Management Unit 56**

**Solid Waste Management Units 53, 60 & 71**





Scale: NTS

Date: June 2005

Checked By: EJM

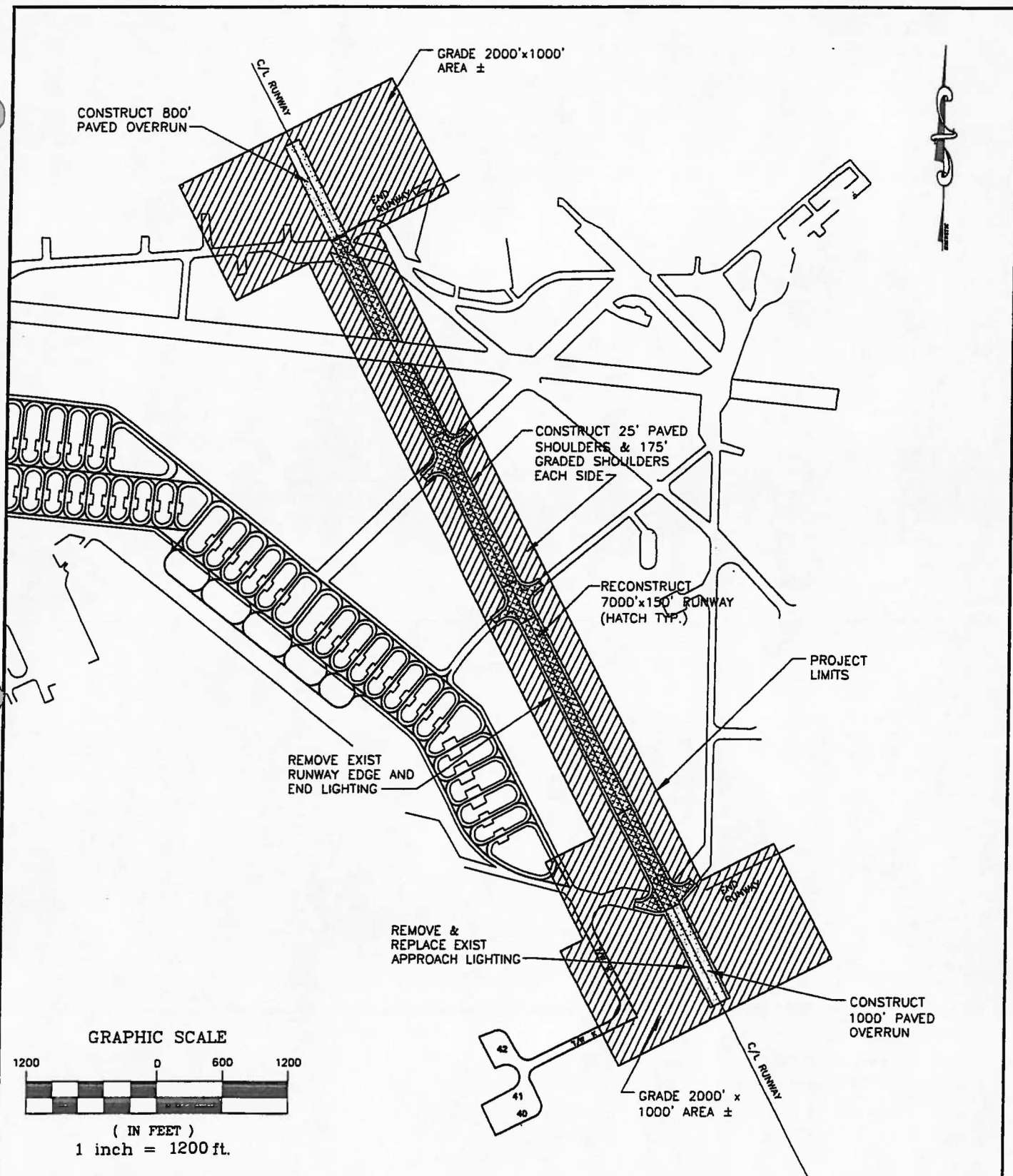


**SITE LOCATION MAP**  
**USGS TOPOGRAPHIC MAP**  
**LADSON QUADRANGLE**  
 Charleston Air Force Base  
 S&ME Project No.: 1134-03-779

Figure No :

1





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• Charlotte, NC  
(843) 566-0161  
Fax: (843) 566-0162  
www.adcengineering.com

#### PROJECT LIMITS

N. CHARLESTON, SC

CHARLESTON COUNTY

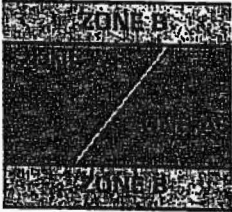
### CAFB 03-21 RUNWAY REPAIR

SCALE: 1" = 1200'

ADC#03431

DECEMBER 23, 2004

# KEY TO MAP

500-Year Flood Boundary	—————	
100-Year Flood Boundary	—————	
Zone Designations*		
100-Year Flood Boundary	—————	
500-Year Flood Boundary	—————	
Base Flood Elevation Line With Elevation In Feet**	~~~~~513~~~~~	
Base Flood Elevation In Feet Where Uniform Within Zone**		(EL 987)
Elevation Reference Mark		RM7X
Zone D Boundary	—————	
River Mile		•M1.5

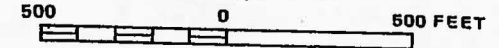
\*\*Referenced to the National Geodetic Vertical Datum of 1929

## \*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

## FIRM FLOOD INSURANCE RATE MAP

CITY OF  
NORTH  
CHARLESTON,  
SOUTH CAROLINA  
CHARLESTON COUNTY

PANEL 12 OF 18  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

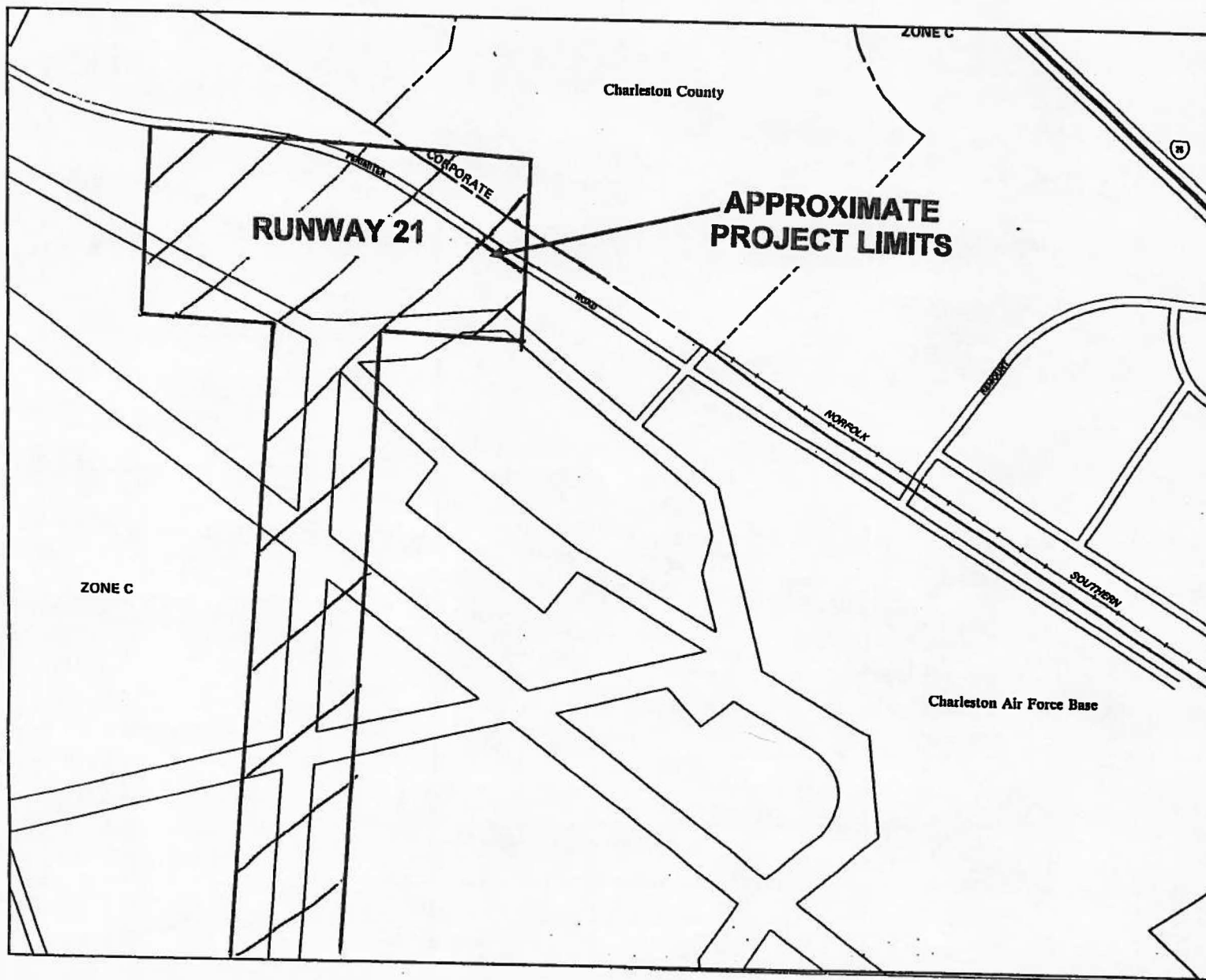
COMMUNITY-PANEL NUMBER  
450042 0012 C

MAP REVISED:  
NOVEMBER 5, 1986

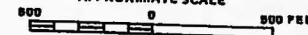


Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
NORTH  
CHARLESTON,  
SOUTH CAROLINA  
CHARLESTON COUNTY

PANEL 9 OF 18  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
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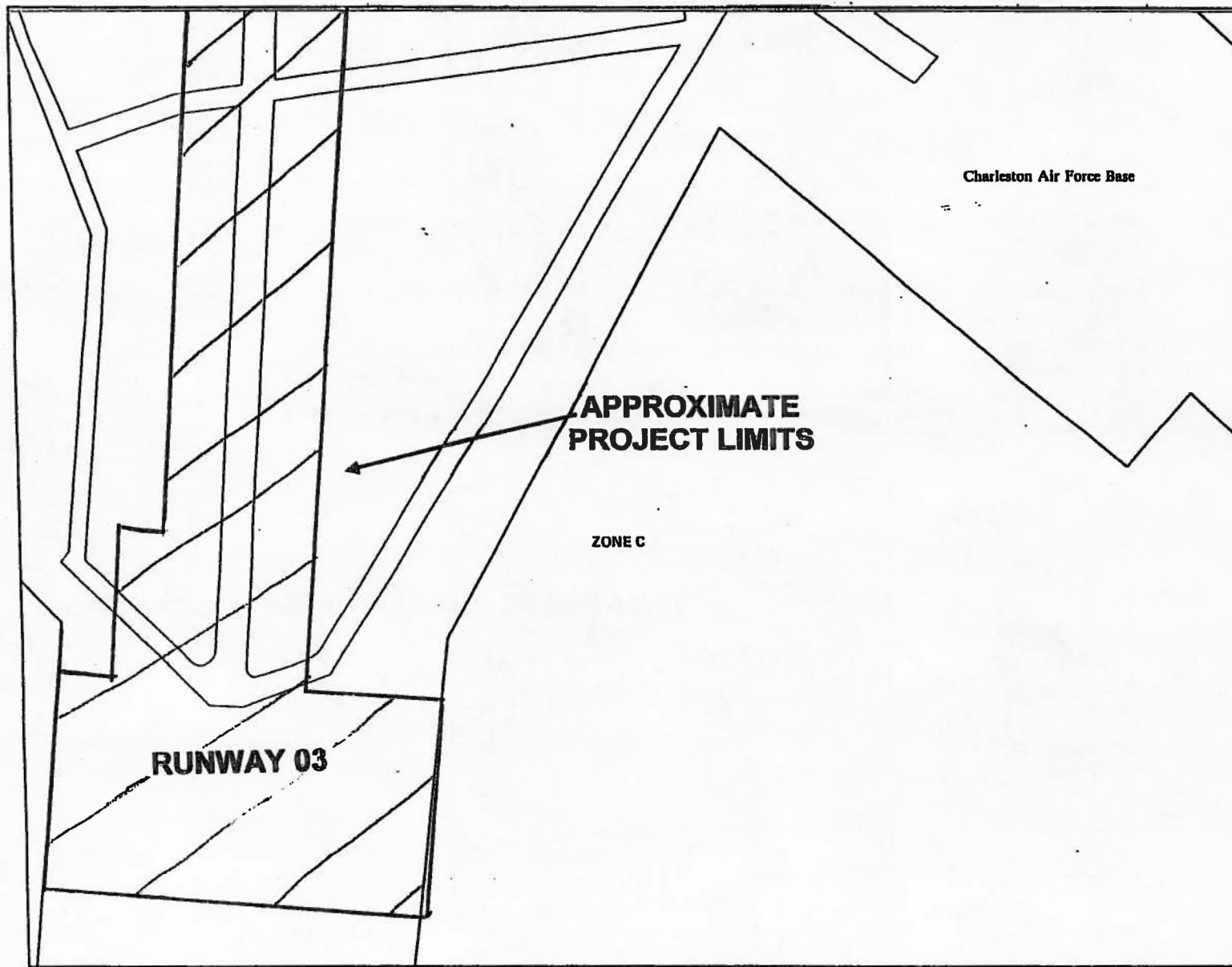
MAP REVISED:  
NOVEMBER 5, 1986



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)





APPROXIMATE SCALE  
500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
NORTH  
CHARLESTON,  
SOUTH CAROLINA  
CHARLESTON COUNTY

PANEL 12 OF 18  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

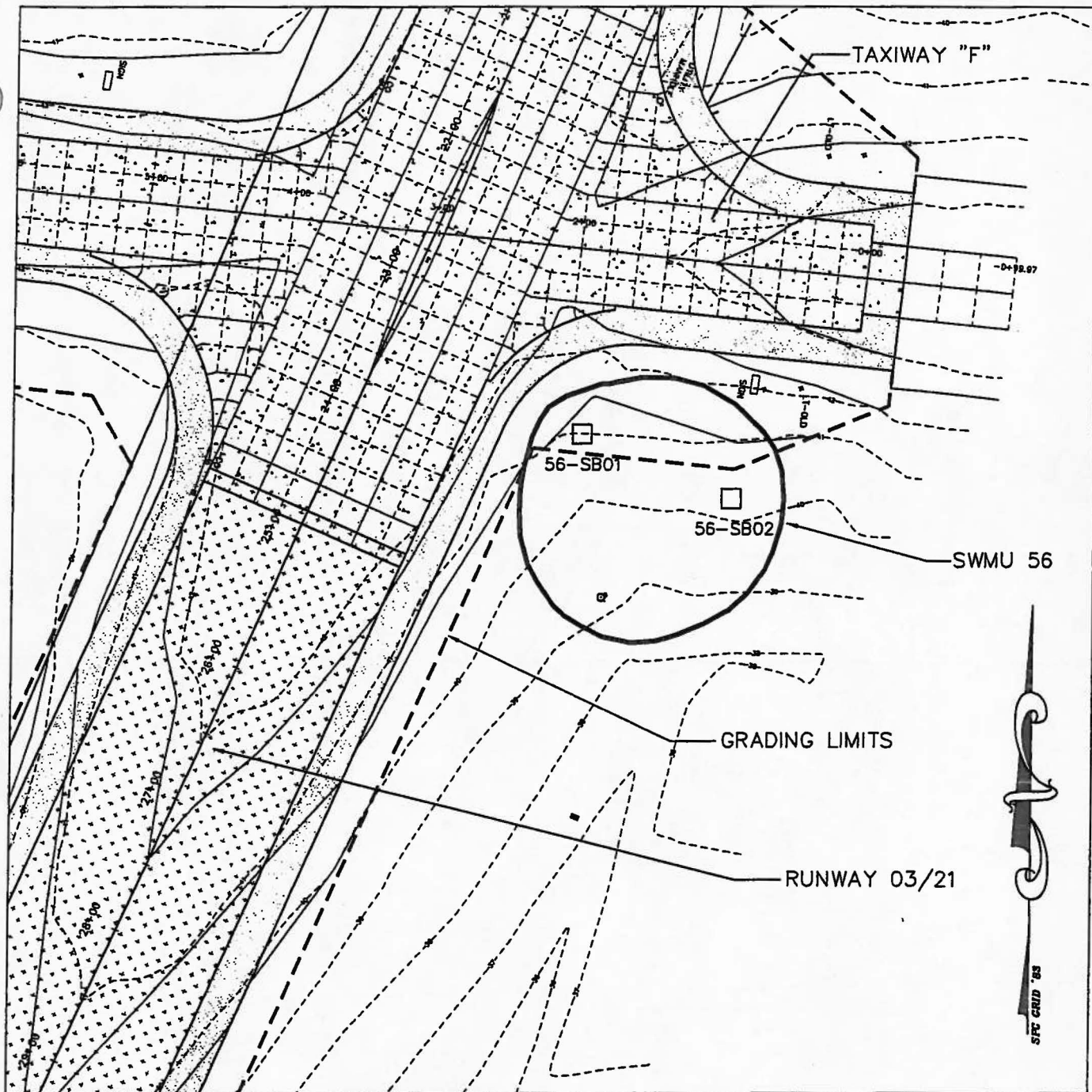
COMMUNITY-PANEL NUMBER  
450042 0012 C

MAP REVISED:  
NOVEMBER 5, 1986



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-50T On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.mss.fema.gov](http://www.mss.fema.gov)



### GRAPHIC SCALE



( IN FEET )  
1 inch = 100 ft.



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1226 YEAMANS HALL RD. HANAHAN, SC 29406 843.566.0161(PH) 843.566.0162(FX)

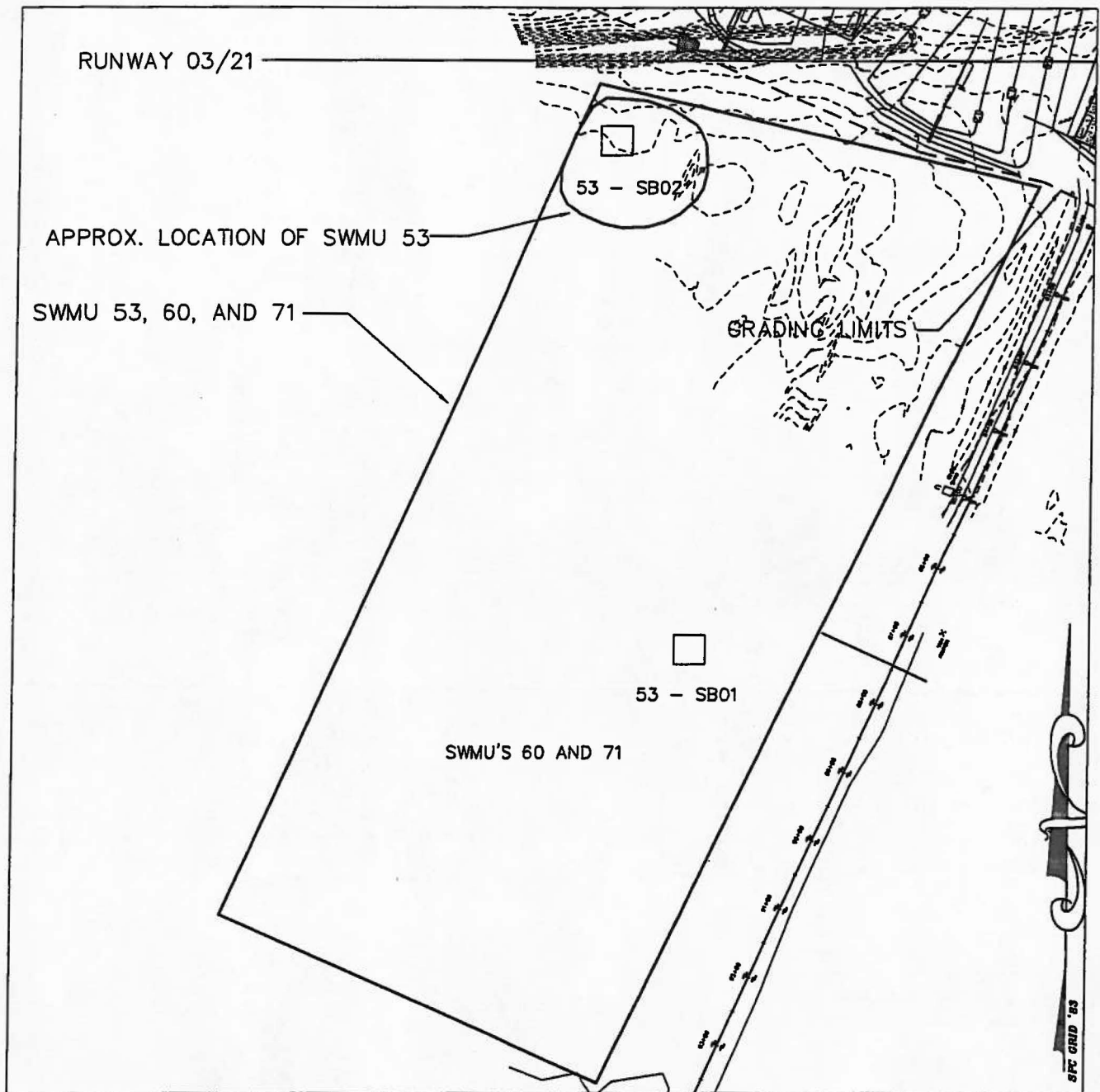
## Repair Runway 03/21 CAFB

### SWMU 56 LOCATION PLAN

PROJ. #: 03431

SCALE: 1"=100'

DATE: 06/10/2005

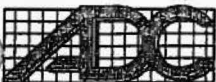


### GRAPHIC SCALE



( IN FEET )

1 inch = 200 ft.



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LAND PLANNING AND LANDSCAPE ARCHITECTURE

1226 YEAMANS HALL RD. HANAHAN, SC 29406 843.566.0161(PH) 843.566.0162(FX)

## Repair Runway 03/21

CAFB

### SWMU 53, 60, & 71 LOCATION PLAN

PROJ. #: 03431

SCALE: 1"=100'

DATE: 06/10/2005

**APPENDIX I**  
**Photographs**



**Charleston Air Force Base  
Runway 03/21 Expansion and Repair  
S&ME Project Number 1134-03-779**



**Runway 03, cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded area.**



**Runway 03 facing south at cleared safety zone along approach lighting to be removed as part of the 1,000 by 2,000-foot graded area.**



**Runway 03 facing north, cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded area.**



**Runway 03, cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded area.**



**Charleston Air Force Base  
Runway 03/21 Expansion and Repair  
S&ME Project Number 1134-03-779**



**Runway 03, cleared safety zone to be graded as part of the  
1,000 by 2,000-foot graded area.**



**Runway 03, cleared safety zone to be graded as part of the  
1,000 by 2,000-foot graded area.**



**Runway 03, cleared safety zone to be graded as part of the  
1,000 by 2,000-foot graded area.**



**Runway 03, cleared safety zone to be graded as part of the  
1,000 by 2,000-foot graded area.**



**Charleston Air Force Base  
Runway 03/21 Expansion and Repair  
S&ME Project Number 1134-03-779**



**Runway 21, cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded cleared area.**



**Runway 21, existing cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded cleared area. Current work being conducted.**



**Stormwater facilities work being conducted in Fall 2004, as runway 21 as part of a separate project.**



**Runway 21, cleared safety zone to be graded as part of the 1,000 by 2,000-foot graded cleared area.**



**Charleston Air Force Base  
Runway 03/21 Expansion and Repair  
S&ME Project Number 1134-03-779**



**Runway 21 existing runway end.**



**Runway 21, cleared safety zone to be graded as part of the  
1,000 by 2,000-foot graded area.**

**APPENDIX II**  
**Regulatory Agency Correspondence**

**US Army Corps of Engineers  
Section 404 Regulatory Coordination**



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 437TH AIRLIFT WING (AMC)

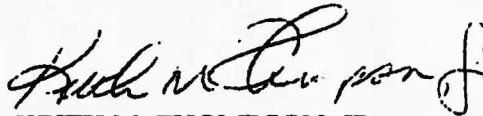
6 January 2005

MEMORANDUM FOR 437 CES/CECC

FROM: 437 CES/CEVP  
100 W. Stewart Avenue  
Charleston AFB SC 29404-4872

SUBJECT: Runway 03/21 Repair Project

1. Please find attached correspondence from the U.S. Army Corps of Engineers in regards to wetlands located at the end of Runway 03 and the subject project. Based on project limits provided by design contractor, the affected wetlands located at the end of Runway 15 would be considered as isolated freshwater wetlands and thus would be non-jurisdictional. Please be advised that this only applies to wetlands located within the project limits. If the scope of this project changes or if project limits are extended, further wetlands determinations may be required.
2. Please note also that this project must still be coordinated with the South Carolina Department of Health and Environmental Control (SCDHEC), Office of Ocean and Coastal Resource Management.
3. If you have any questions, please feel free to give me a call at extension 3-4020.

  
KEITH M. THOMPSON, JR.  
Conservation Program Manager

2 Attachments:

1. US Army Corps of Engineers Memo, 8 December 04
2. Wetland Determination Package, 21 Oct 04

cc:  
437 CES/CEVQ



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**CHARLESTON DISTRICT, CORPS OF ENGINEERS**  
69A Hagood Avenue  
CHARLESTON, SOUTH CAROLINA 29403-5107

December 8, 2004

Regulatory Division

Mr. Keith Thompson  
437 CES/CEV  
100 W. Stewart Avenue  
Charleston AFB, South Carolina 29404-4827

Dear Mr. Thompson:

This is in response to your letter of October 21, 2004 and our telephone conversation pertaining to a previous wetland determination (SAC 47-2001-2011). Our letter was dated March 18, 2002 and is still accurate.

Based on our letter the wetlands associated with the southeastern end of runway 3 are considered isolated and non-jurisdictional. A copy of this letter will be placed in our original file (SAC 47-2001-2011)

If you have any questions concerning this matter, please contact me at 843-329-8044 or toll free at 1-866-329-8187.

Respectfully,

A handwritten signature in black ink, appearing to read "James Struble".

James Struble, Ph.D.  
Biologist

# REQUEST FOR WETLANDS DETERMINATION

Date: 10-21-04

County: Charleston

Total Acreage of Tract: Approx. 1.75

Project Name (if applicable): Runway 03/21 Repair

Property Owner  
(name, address, phone):  
U.S. Air Force

Agent/Developer/Engineer  
(name, address, phone):  
Keith Thompson

Charleston AFB, SC

437 CES/CEV

100 W. Stewart Ave.

Charleston AFB, SC 29404-4827

**Status of Project (check one):**

- ☐ On-going site work for development purposes  
☒ Development in planning stages  
☐ No specific development plans at this time

**Project Type -** Indicate the proposed use of the land in question or, if no specific work is planned at present, indicate the current zoning or land use at the site. (check one):

- ☐ Residential ☐ Commercial ☐ Mixed Use (Residential + Commercial)  
☐ Industrial ☐ Agriculture ☐ Public Works  
☐ Silviculture ☐ Aquaculture ☒ Other: Airfield Work

**Information Required to Accompany Request -** Check the items submitted - forward as much information as is available. At a minimum, the first two items must be forwarded:

- ☐ Accurate Location Map (from County Map, USGS Quad Sheet, etc.)  
☐ Survey Plat or Tax Map of the Property in Question  
☐ Soil Survey Sheet (from USDA-NRCS) or Aerial Photo (from County Assessor's Office or other source).  
Property boundaries should be show on the soil survey / photo.  
☐ Topographic Survey  
☐ Conceptual Site Plan for the Overall Development

**Endangered Species Evaluation:**

Has the site been evaluated for the presence of federally protected (endangered, threatened or proposed) species and/or any proposed or designated critical habitat for such species? YESX NO

If Yes, has this evaluation been coordinated with the US Fish and Wildlife Service (FWS)? YESX NO

If coordination has occurred, please provide the FWS Log number and enclose a copy of the report:

FWS Log Number: 4-6-04-I-142 Copy of Report enclosed? YES NOX

If the evaluation has not been coordinated with the US FWS, enclose a copy of your report of findings.

**IMPORTANT NOTE:** Legible printed name and signature required. The person signing this form must be the present property owner or have the specific authority of the property owner to authorize Corps of Engineers employees or their agents to enter onto the property for on-site investigations if such is deemed necessary.

Do not sign this form unless you are the owner, or have the specific authority of the property owner.

The signature of the owner or authorized agent on this form constitutes prior consent to disclose these records to other federal, state or local governmental agencies and the public at large.

PRINTED NAME of person signing this form, below: KEITH THOMPSON

Signature of Property Owner or Authorized Agent: Keith M. Thompson





1000' x 2000'  
GRADED PORTION OF  
CLEAR ZONE  
RUNWAY 03

This is an aerial photograph with overlaid technical markings. A runway, labeled 'RUNWAY 03', runs diagonally from the upper left towards the center. Adjacent to the runway is a rectangular area outlined with dashed lines, labeled '1000' x 2000' GRADED PORTION OF CLEAR ZONE'. To the right of the runway and clear zone is a large, dark, stippled area representing wetlands. A road or path runs horizontally across the lower portion of the image, with some buildings or structures visible below it. The background consists of a textured, stippled area representing terrain or vegetation.

DATE: MARCH 18, 2002  
APPROXIMATELY 1.75 ACRES  
ISOLATED NON-JURISDICTIONAL  
WETLANDS





REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**CHARLESTON DISTRICT, CORPS OF ENGINEERS**  
69A Hagood Avenue  
CHARLESTON, SOUTH CAROLINA 29403-5107

March 18, 2002

Regulatory Division

Mr. Keith M. Thompson  
Conservation Program Manager  
437 CES/CEVP  
100 W. Stewart Avenue  
Charleston AFB, South Carolina 2940-48274

Re: SAC 47-2001-2011  
Charleston County

Dear Mr. Thompson:

This is in response to your letter of December 18, 2001 requesting the Corps to reevaluate particular wetland areas located at the end of the Charleston Air Force Base (CAFB) runways 3, 15, and 33 in order to determine if they are isolated non-jurisdictional areas. Your request is based on the recent U. S. Supreme Court decision concerning isolated wetlands.

The original wetland delineation for the CAFB was verified in my letter of November 24, 1998, file SAC-80-98-3440. This verification was for the approximated wetland boundaries located within the base as depicted on Figure 3 of your document entitled "FINAL REPORT FOR NATURAL RESOURCE SURVEYS", dated October 1997. You have indicated that due to recent safety guidelines, the CAFB is required to set up a 3000' X 3000' clear zone at the end of each runway. It is my understanding that a 1000' X 2000' portion of this area is termed the "graded area" which is required to be cleared, grubbed, and graded of all tree sized vegetation. The remainder of this 3000' X 3000' area is termed the "glide slope" area. It is our understanding that only trees interfering with the glide slope will be cut and removed and will not involve any mechanized land clearing activity. Therefore, a Department of the Army permit will not be required for this work.

As a result of an on site inspection of the three proposed 1000' X 2000' graded areas with Mr. Harold Deese of your staff on February 20, 2002, I determined that the wetlands located at the end of runways 3 and 15 are isolated, non-jurisdictional areas. Further, as I discussed with Mr. Deese, the wetland area at the end of runway 3 is smaller than as originally depicted on Figure 3, referenced above. Please find enclosed a sketch dated March 18, 2002, which more accurately depicts the approximated boundary of this wetland. Based on my calculations, this wetland is approximately 1.75 acres in size. Also, please be advised that the wetlands located at the end of runway 33 were determined to be jurisdictional wetlands since they are part of the Filbin Creek watershed.

Based on the proposed acreage impacts to the jurisdictional wetlands at the end of runway 33, a Department of the Army permit will be required. Also, keep in mind, even though the wetlands located at the ends of runways 3 and 15 are isolated and not subject to the direct

permitting authority of this office, the alteration of these areas will have to be addressed in the permit process as secondary impacts and mitigation will be required for those impacts.

In future correspondence concerning this matter, please refer to SAC 47-2001-2011. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management for their requirements. A copy of this letter is being forwarded to them for their information.

If you have any questions concerning this matter, please contact me at 843-329-8044 or toll free (outside of the Charleston area) at 1-866-329-8187.

Respectfully,

  
Fred Veal  
Biologist

**Copy Furnished:**

South Carolina Department of Health  
and Environmental Control  
Office of Ocean and Coastal  
Resource Management  
1362 McMillan Avenue, Suite 400  
Charleston, South Carolina 29405

**US Fish and Wildlife Service**



## United States Department of the Interior

**FISH AND WILDLIFE SERVICE**  
176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407

April 12, 2005

Mr. Keith Thompson, Jr.  
Department of the Air Force  
Conservation Program Manager  
437 CES/CEVP  
100 W. Stewart Avenue  
Charleston AFB, SC 29407

Re: CAFB Runway Extension  
Charleston County  
FWS Log No. 4-6-04-I-142R

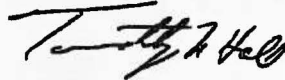
Dear Mr. Thompson:

The U.S. Fish and Wildlife Service (USFWS) has reviewed the plans for this proposed project. Based on our review and the information received:

- ☐ It is our opinion that the proposed action will have no effect on resources under the jurisdiction of the USFWS that are currently protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act). Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☐ We concur with your determination that the proposed action is not likely to adversely affect resources under the jurisdiction of the USFWS that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☒ It is our opinion that the proposed action is not likely to have reasonably foreseeable adverse effects on resources under the jurisdiction of the USFWS that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- ☐ The proposed project may impact wetlands. Please contact the U.S. Army Corps of Engineers, Charleston District for more information.

If you should have any questions, please contact Melissa Bimbi at (843)727-4707, ext. 204 and reference FWS Log No. 4-6-04-I-142R.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy N. Hall", written in a cursive style.

Timothy N. Hall  
Field Supervisor

TNH/MKB



# United States Department of the Interior

**FISH AND WILDLIFE SERVICE**  
176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407

February 5, 2004

Mr. Al E. Urrutia  
Chief, Environmental Plans and Programs Section  
Department of the Air Force  
Headquarters 437<sup>th</sup> Airlift Wing (AMC)  
437 CES/CEVP  
Charleston, South Carolina 29404-4827

Re: Final Natural Resources Surveys for Charleston Air Force Base (CAFB) and North  
Auxiliary Airfield (NAAF)  
Charleston, South Carolina  
FWS Log No. 4-6-04-I-142

Dear Mr. Urrutia:

We have reviewed the information received January 4, 2004, concerning the above-referenced project in Charleston County, South Carolina. The following comments are provided in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1543).

The information provided contains results of natural resource studies conducted for 437 CES/CEV on Charleston Air Force Base (CAFB) and North Auxiliary Field (NAAF) under contract F41624-94-D-8048. The studies provided an inventory of the entire installation for currently listed federally protected species including endangered and threatened species, and species of concern. The study was conducted between April and August of 2003. While no endangered or threatened species were identified on site, the painted bunting, federal species of concern, was located in two areas.

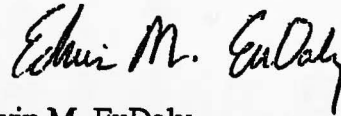
Based on the information received, we will concur with a determination that this action is not likely to adversely affect federally listed or proposed endangered and threatened species. In view of this, we believe that the requirements of Section 7 of the Endangered Species Act have been satisfied. However, obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of this identified action that may affect listed species or critical



habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

Your interest in ensuring the protection of endangered and threatened species and our nation's valuable wetland resources is appreciated. If you have any questions please contact Ms. Paula Sisson of my staff at (843) 727-4707, ext. 18. In future correspondence concerning the project, please reference FWS Log No 4-6-04-I-142.

Sincerely yours,

A handwritten signature in cursive script that reads "Edwin M. EuDaly".

Edwin M. EuDaly  
Acting Field Supervisor

EME/PTS

**South Carolina Department of Archives and History**



April 7, 2005

Keith Thompson, Jr.  
Conservation Program Manager  
437 CES/CEVP  
100 W. Stewart Avenue  
Charleston AFB SC 29404-4827

Re: Proposed Repairs and Extension of Runway  
Runway 03/21  
Charleston Air Force Base, Charleston County, South Carolina

Dear Mr. Thompson:

Thank you for your letter of February 22<sup>nd</sup>, which we received on March 7<sup>th</sup>, regarding the above-referenced project.

Based on the information you have provided, our office concurs that no properties included in or eligible for inclusion in the National Register of Historic Places will be affected by this project. We do not require a cultural resources survey for this project.

We do request that our office be notified immediately if archaeological materials are encountered during construction. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials.

These comments may be provided as evidence of your consultation with the State Historic Preservation Office pursuant to Section 106 of the National Historic Preservation Act, as amended. If you have questions, please call me at (803) 896-6169.

Sincerely,

Richard Sidebottom  
Review and Compliance Coordinator  
State Historic Preservation Office



RECEIVED JUL 13 1998

July 8, 1998

Mr. Al E. Urrutia  
Cultural Resources Manager  
437 CES/CEVP  
100 W. Stewart Avenue  
Charleston, AFB, SC 29404-4827

RE: Draft Report of *Archeological Survey of the Hunley Park Housing Area, Charleston Air Force Base, South Carolina*

Dear Mr. Urrutia:

I have reviewed the above referenced survey report. The report meets both State and Federal standards for the identification, documentation, and assessment of cultural resources. As mentioned in the report, our office concurred on March 20, 1998 with the recommendation that site 38CH1705; the only site identified by the survey, is not eligible for the National Register of Historic Places. We do request that you forward to us two bound copies, with cover stock, of the final report. This is necessary to ensure the long-term storage of the information both with our office and at the South Carolina Institute of Archaeology and Anthropology.

These comments are being provided to assist you with your responsibilities under Sections 106 and 110 of the National Historic Preservation Act. I can be contacted at (803) 896-6173 if you have any questions or comments.

Sincerely,

Valerie Marcil  
Staff Archaeologist  
State Historic Preservation Office

**PROGRAMMATIC AGREEMENT  
AMONG CHARLESTON AIR FORCE BASE, SOUTH CAROLINA  
OF THE UNITED STATES AIR FORCE**

**THE ADVISORY COUNCIL ON HISTORIC PRESERVATION  
AND THE SOUTH CAROLINA DEPARTMENT OF ARCHIVES AND HISTORY  
FOR OPERATION, MAINTENANCE, AND DEVELOPMENT UNDERTAKINGS  
AT CHARLESTON AIR FORCE BASE, SOUTH CAROLINA**

WHEREAS, the United States Department of the Air Force (Air Force) has determined that operation, maintenance, and development undertakings at Charleston Air Force Base (Charleston AFB) may have an effect upon unidentified historic properties; and

WHEREAS, the Air Force has completed the identification requirements on Charleston AFB under Section 110 of the National Historic Preservation Act (16 USC Sec. 470f) (NHPA); and

WHEREAS, the Air Force has consulted with the Advisory Council on Historic Preservation (Council) and the South Carolina Department of Archives and History (SCDAH) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 USC Sec. 470f) to develop a Programmatic Agreement regarding review of operation, maintenance, and development undertakings at the base;

NOW THEREFORE, the Air Force, the Council and the SCDAH agree that operation, maintenance, and development undertakings shall be administered in accordance with following stipulations to satisfy the Air Force's Section 106 responsibilities for such undertakings:

## STIPULATIONS

The Air Force shall ensure that the following are carried out.

### I. Administration of the Agreement

The 437 CES/CEV shall be the Air Force point of contact for all matters relating to the cultural resources management program. This shall not prohibit communication between other parties. The 437 CES/CEV shall provide, at minimum, training for one member of their staff.

### II. Cultural Resources Management Plan

The Air Force has developed a Cultural Resources Management Plan (CRMP) for the base in accordance with Air Force guidelines. The review process set forth below will be followed according to the procedures outlined in the Cultural Resources Management Plan as the procedure for Section 106 compliance.

### III. Undertakings That Do Not Require Review

A. There are no known historic properties on Charleston AFB eligible for the National Register of Historic Places (NRHP). Therefore, SCDAH review shall not be necessary within the 1999 boundaries of Charleston AFB.

B. If Charleston AFB proposes any undertakings outside its 1999 boundaries, Charleston AFB shall comply with Section 106 of NHPA according to the regulations in 36 CFR 800.

### IV. Protection of Archeological Resources

A. In the event that Charleston AFB encounters unanticipated archeological material during an undertaking, Charleston AFB shall comply with the Archeological and Historic Preservation Act of 1974.

B. If unanticipated Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony are found on Charleston AFB, Charleston AFB will comply



with the requirements of the Native American Graves Protection and Repatriation Act of 1990.

## **V. Dispute Resolution**

A. Should any party to this Agreement object to any actions proposed or undertaken pursuant to this Agreement, the Air Force shall consult with the objecting part to resolve the dispute. If the Air Force determines the objection cannot be resolved, it shall follow standard procedures as outlined in 36 CFR Part 800 to comply with National Historic Preservation Act Section 106 requirements.

B. If any of the parties to this Agreement believe that the terms of the Agreement cannot be carried out, or that an amendment to the terms of the Agreement is required, that party shall immediately notify the other parties and request consultation to amend this Agreement. A new agreement shall be proposed by the objecting party, and if accepted by the other parties, shall be signed and made an amendment to this agreement..

## **VI. Renewal**

This agreement shall be in effect for five years from the execution date, which shall be the date of the final signature. Before the end of the fifth year, the Agreement shall be reviewed by the Air Force, the SCDAH, and the Council for possible modifications, termination, or extension. At the request of any of the parties, this Agreement may be reviewed for possible modifications, termination, or extension at any time.

## **VII. Compliance with the Anti-Deficiency Act**

Any requirement for the payment of funds by Charleston AFB, established by terms of this agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. 1341).

In the event that the Air Force is unable to carry out the terms of this Agreement due to the provisions of the Anti-Deficiency Act, the Air Force shall advise the SCDAH and the Council and shall otherwise comply with all requirements of 36 CFR Part 800.

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Execution of this Agreement and carrying out its terms demonstrates that the Air Force has satisfied its Section 106 responsibilities for all individual undertakings of the program addressed herein.

CHARLESTON AIR FORCE BASE

By: \_\_\_\_\_

Date: \_\_\_\_\_

Vern M. Findley II

Col, USAF

Commander, 437th Airlift Wing

SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICER

By: \_\_\_\_\_

Date: \_\_\_\_\_

Mary Edmonds

Deputy State Historic Preservation Officer

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: \_\_\_\_\_

Date: \_\_\_\_\_

Don Klima

Director

**South Carolina Department of Health and Environmental Control  
Office of Ocean and Coastal Resource Management**